Elto: Syntex-Veron



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February 27, 1981

Dr. Kathleen Camin Regional Administrator U.S. Environmental Protection Agency Region VII 324 East Eleventh Street Kansas City, Missouri 64106

Dear Dr. Camin:

This is another in a continuing series of reports to you to keep you apprised of the progress of the detoxification of the 4600 gallons of dioxin-containing wastes abandoned by the North Eastern Pharmaceutical and Chemical Co., (NEPACCO) at our plant in Verona, Missouri and of events related thereto.

From prior discussions and engineering drawings provided by Syntex to EPA you may recall a mild steel tank, designated T-24, located inside the fenced and posted detoxification security area approximately thirty feet north of the detoxification equipment dike. Since the beginning of the processing in May, 1980 and subsequent to the shut-down of the photolysis process, rainwater that gathered in the bottom of the equipment dike has been pumped to T-24. Both EPA and Syntex correctly anticipated that this rainwater would contain little or no dioxin. The rainwater was sampled on August 27, 1980 and assayed twice. No dioxin was detected at the sensitivity limit of the first assay, 2 parts per billion. A split of the same sample was analyzed a second time by EPA and a result of 130 parts per trillion (ppt) of dioxin was reported.

As you know, all equipment in the detoxification area is regularly and routinely inspected. During the course of a routine check, one of our employees noted a leak in the valve at the bottom side of T-24. Corrective action was taken immediately and the leak was stopped. Further investigations indicate that the unusual cold spell the Verona area experienced caused the freezing of material within a heavy-duty stainless steel ball flange valve at the base of T-24 which expanded and thus stripped one of the flange bolts holding the valve together. Tightening of the several adjoining bolts brought the leak to a halt. Remaining material from T-24



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was then pumped into a holding dike (designated T-9) which had been used during detoxification for evaporation of process water. The valve which had malfunctioned was removed and replaced with a blind flange which seals the transfer pipe. It is estimated, based on comparative volume calculations, that approximately 500 gallons of rainwater escaped from the tank, wetting down an area entirely within the secured destruct site of approximately 15 feet across. This area has been covered with plastic as a precautionary measure.

We then took and analyzed an additional two samples of the rainwater. The results of analyses of these samples showed lower dioxin levels than EPA's prior analysis: 20 parts per trillion (ppt) and 80 parts per trillion (ppt), respectively.

After taking the corrective actions described above and in light of the unusually severe freeze, Syntex performed a non-routine, intensive inspection of its facilities in the destruct area. A small trickling leak was noticed coming from the upper portion of one of the cement walls of T-9. This dike, as you also may recall from prior discussions and engineering drawings, is entirely above ground and is approximately 60' x 20' x 4' high, with 8" thick cement walls and 10" thick floor. It is located approximately 90' north of tank T-24 within the secured destruct area. The leak emanated from a small crack which began at the top lid of the dike and extended down approximately 20 inches. While it is difficult to estimate the quantity of rainwater which trickled out of the dike, it seems minimal; there is no standing water or visible wetness on the ground beneath the crack. Further, the level of rainwater within the dike remained constant.

The leak was plugged, immediately upon discovery, by pressing soft teflon into the crack and also injecting into the crack and coating the outside with a quick setting cement called Water Plug, which is designed for patching and sealing water leaks in concrete. This material, which expands as it sets up and cures fully even when wet, has completely stopped the leak. As an added precaution, in order to relieve stress on dike T-9 while enabling evaporation to continue, approximately half the material was pumped back into the now secure T-24.

For the future, again as an added precaution, we are arranging to have available within the secured area additional storage capacity.

Because of this unpredictable event we wish to raise again a matter that is much in our minds and has been the subject of many discussions between ourselves and EPA. As we are all aware, to date neither Syntex nor EPA has been able to determine a method of finally disposing of the materials from or related to our photolysis

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process. On many occasions EPA has promised its help in finding a solution to this problem. We wish to call upon you most urgently to lend your full resources to help resolve this problem. We will not relax our vigilance in the interim, but it would be a tremendous service to the surrounding community, the environment and to all Syntex employees if you would redouble your efforts in this regard.

Sincerely yours,

Earl L. Barkley

V.P. and General Manager

ELB/kfs